Name:_____( ) Class: ____ Date:_____

Testing yourself

Multiplication of fractions

Ans.

Which of the following expressions is most suitable to estimate the value of $15\frac{8}{9} \times \frac{1}{12}$?

☐ A. 16 x 1 ☑ B. 16 x 0.1 ☐ C. 15 x 0.2 ☐ D. 15 x 1

1. 5 small ribbon flowers have to be used to make 1 big ribbon flower. If a small ribbon flower uses up $\frac{4}{9}$ m of ribbon, how many metres of ribbon are needed to make a big ribbon flower?

   $\frac{4}{9} \times 5 = \frac{20}{9} = 2\frac{2}{9}$

   Make a big ribbon flower needs $2\frac{2}{9}$ m of ribbon.

2. Wendy has $1\frac{5}{8}$ pizzas. She gives $\frac{4}{15}$ of them to Carol. How much pizza does Carol have?

   $1\frac{5}{8} \times \frac{4}{15} = \frac{13}{8} \times \frac{4}{15} = \frac{13}{30}$

   Carol has $\frac{13}{30}$ pizza.

3. Jason had 144 stamps. He gave $\frac{5}{8}$ of them to Maya and $\frac{1}{3}$ of them to Jessie. How many more stamps did Maya get than Jessie?

   $144 \times \left(\frac{5}{8} - \frac{1}{3}\right) = 144 \times \left(\frac{15}{24} - \frac{8}{24}\right) = 144 \times \frac{7}{24} = 42$

   Maya got 42 stamps more than Jessie.

4. Mr. Cheung's salary was $13 200 last month. His salary increased by $\frac{2}{15}$ this month. How much did he earn this month?

   $13200 \times \left(1+\frac{2}{15}\right) = 13200 \times \frac{17}{15} = 14960$ *or* $13200 + 13200 \times \frac{2}{15} = 14960$

   He earn $14960 this month.

5. Hilton has 180 marbles. $\frac{1}{6}$ of the marbles are red and the rest are blue. How many blue marbles does Hilton have?

   $180 \times \left(1 - \frac{1}{6}\right) = 180 \times \frac{5}{6} = 150$ *or* $180 - 180 \times \frac{5}{6} = 150$

   Hilton has 150 blue marbles.

6. Each adult ticket to a carnival costs $\$37\frac{1}{2}$, and the price of a child ticket is $\frac{3}{5}$ the price of an adult ticket. How much does Gavin need to pay for 6 child tickets?

$37\frac{1}{2} \times \frac{3}{5} \times 6 = \frac{75}{2} \times \frac{3}{5} \times 6 = 25 \times 3 \times 3 = 225$

Gavin needs to pay $225

7. There are 216 story books in the library. $\frac{1}{8}$ of them were borrowed on Thursday and $\frac{3}{12}$ of them were borrowed on Friday. How many story books were borrowed in all?

$216 \times (\frac{1}{8} + \frac{3}{12}) = 216 \times (\frac{3}{24} + \frac{6}{24}) = 216 \times \frac{3}{24} = 81$

There are 81 story books were borrowed in all.

CHALLENGE YOURSELF (optional)

8. The marked price a bowl is $\$ 23\frac{1}{2}$. It is $\$5\frac{4}{5}$ cheaper during promotion. If I buy a dozen bowls, how much can be saved?

$5\frac{4}{5} \times 12 = \frac{29}{5} \times 12 = \frac{348}{5} = 69\frac{3}{5}$

It can save $\$69\frac{3}{5}$.

9. A little pig weighs $32\frac{2}{5}$ kg. A little cow weighs $\frac{8}{9}$ times as heavy as 3 little pigs. A dog's weight is $\frac{3}{4}$ of the little cow's weight. Find the weight of dog.

$32\frac{2}{5} \times 3 \times \frac{8}{9} \times \frac{3}{4} = \frac{162}{5} \times 3 \times \frac{8}{9} \times \frac{3}{8} = 32\frac{2}{5}$

A dog weighs $32\frac{2}{5}$ kg.

10. There are 150 pictures in a book. $\frac{2}{5}$ of them are pictures of birds, $\frac{2}{15}$ are pictures of fish and the rest are picture of insects. How many pictures of birds and insects are there in the book?

$150 \times \frac{2}{5} + 150 \times (1 - \frac{2}{5} - \frac{2}{15}) = 130$

There are 130 pictures of birds and insects.

Name:_____( ) Class: _____ Date:_____

Testing yourself

Division of fractions

Ans

1. Susan divides $1\frac{1}{2}$ kg of sugar into 4 packets equally. How many kilograms does each packet of sugar weigh?

   $1\frac{1}{2} \div 4 = \frac{3}{8}$

   Each packet of sugar weighs $\frac{3}{8}$ kg.

2. Mr Chan pours $10\frac{4}{5}$ kg of insecticide into bottles of $\frac{2}{3}$ L. How many bottles are needed?

   $10\frac{4}{5} \div \frac{2}{3} = 16\frac{1}{5}$

   17 bottles are needed.

3. Each kilogram of chocolate fingers costs $\$22\frac{1}{5}$. How many kilograms of chocolate fingers can be bought with $\$18\frac{1}{2}$?

   $18\frac{1}{2} \div 22\frac{1}{5} = \frac{5}{6}$

   $\frac{5}{6}$ kg of chocolate fingers can be bought with $\$18\frac{1}{2}$.

4. There are 6 buckets of sauce. Each bucket holds $27\frac{1}{2}$ L of sauce. The worker divides the sauce into bottles of $\frac{5}{6}$ L. How many bottles are needed?

   $27\frac{1}{2} \times 6 \div \frac{5}{6} = 198$

   198 bottles are needed.

5. A bag of salt that weighs $6\frac{2}{3}$ kg is shared among 10 boys. Each boy divides the salt he gets into portions of $\frac{1}{6}$ kg. How many portions of salt does each boy get?

   $6\frac{2}{3} \div 10 \div \frac{1}{6} = 4$

   Each boy gets 4 portions of salt.